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Rain Garden Plants: *Muhlenbergia capillaris* - Muhly Grass

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A rain garden is a shallow vegetated depression designed to capture stormwater runoff and allow the water to soak into the ground. These gardens function as natural filters that improve water quality, provide wildlife habitat and feature beautiful native, perennial plants. *Muhlenbergia capillaris*, from the family *Poaceae* or grass family, is a native plant suited for many rain gardens and provides year-round colors. Its common names include Muhly Grass, Mist Grass, Gulf Muhly Grass, Sweetgrass, and Pink Muhly Grass.

History and Traditions

The *Muhlenbergia* genus is named after Henry Muhlenberg (1753-1815). An accomplished botanist, chemist and mineralogist. Muhlenberg is known as America's first outstanding botanist². *Muhlenbergia*, also called sweetgrass, is used in the low-country of South Carolina for traditional basket weaving³.



Traditional sweetgrass baskets and green sweetgrass roses for sale along the streets of Charleston, South Carolina.



Muhlenbergia capillaris in the Sustainable Landscape display garden at Clemson University. (Image: S.A. White © 2014)

Benefits

The green, needle-like foliage of muhly grass emerges during the spring and grows to mature size by summer, providing an excellent texture variation for perennial borders, flower beds and rain gardens. In the fall, muhly grass creates a spectacular floral display of light, airy flowers. Its pink, purple or white flowers fade to tan or brown seed plumes, which hold up well from late fall through winter. These seed plumes are a food source for birds. Muhly grass also attracts beneficial insects such as lady beetles⁴ (*Coccinella spp.*) and its clumping habit provides habitat for other wildlife.

Planting and Care

Muhly grass has a native range that extends from Kansas to Massachusetts and south to Florida. In natural conditions muhly grass grows as a solitary plant or in dense stands. It is traditionally found in wet prairies, savannas, the outer edge of marshes, and well-drained upland pine forests. On the coast it is often found in inter-dune swales. This plant can tolerate a variety of soil types and moisture conditions.

Muhly grass works well in poor soils as a groundcover and can be used to prevent soil erosion. Muhly grass is tolerant of salt spray and poor soils typical of coastal settings. Once established, this extremely low maintenance grass works well in roadside and median plantings; it is also widely used in golf course landscaping as well as meadow and rain gardens.

Although some *Muhlenbergia* species and cultivars are more tolerant of wet conditions than others, sites with good drainage are preferred. Most rain garden soils have been amended and provide adequate drainage. Muhly grass requires supplemental irrigation when planted, but is very drought tolerant once established. Although drought tolerant, muhly grass will look better and flower more profusely with periodic supplemental irrigation during periods of drought. Muhly grass is a clumping species and should be periodically divided during the spring or early summer to renew vigor. In addition, before new growth begins in early spring, it is recommended to cut foliage back to the ground.

Table 1. Plant preferred site conditions

Light: Full sun – light shade

Zones: 7 - 10

Origin: USA

Type: Ornamental Grass

Moisture: Somewhat drought tolerant once established, cultivar dependent

Moisture timing: Grass grows larger with supplemental moisture.

Soil: Tolerant of a range of soil conditions alkaline to acid, sandy soils, sandy, sandy loam



Muhlenbergia capillaris 'White Cloud' along walkway at the Atlanta Botanical Garden. (Image: S.A. White © 2012)



Muhlenbergia capillaris in early spring established in a rain garden at Furman University. (Image: S.A. White © 2012)

Garden Design

Muhly grass is a mid-range height ornamental grass and is best used as an intermediate or connecting plant in perennial borders, meadow and rain gardens. To achieve the highest impact in the landscape, create massed plantings using large clumps so that the delicate purple and pink (white) flowers are concentrated and more visible.

Muhly grass can be paired with evergreen shrubs such as holly (*Ilex glabra*, *Ilex vomitoria*) or combined with deciduous shrubs like blueberry (*Vaccinium corymbosum*) or deciduous holly (*Ilex verticillata*, common winterberry). For multi-season color consider pairing with showy perennials such as butterfly milkweed (*Asclepias tuberosa*, orange-yellow flowers during summer), columbine (*Aquilegia canadensis*, red flowers in spring) hardy

ageratum (*Conoclinium coelestinum*, violet-blue flowers summer through fall), joe-pye weed (*Eupatorium coelestinum*, pink-red flat topped flowers late summer), and iris species (*Iris ensenata*, *I. sibirica*, *I. versicolor*, *I. virginiana*, white, purple flowers spring through summer).

Table 2. Design considerations: Growth habit and plant interest.
Height & Width: 3' h x 2-3' w
Spacing: 2' – 3'
Growth rate: Fast
Habit: Mounded, clumping
Foliage: Yellow - dark green, fine texture leaves. Stems are wiry, unbranched, and originate from a dense basal clump.
Flower: Airy purple, pink, white, silky, diffuse, multi-branched flower stalk in late summer/early fall persists 6 – 8 weeks.
Fall color: Floral display is the fall attraction, once flowers fade seed heads provide architectural/ structural interest.



Mature *Muhlenbergia capillaris* 'White Cloud' at Moore Farms Botanical Gardens. (Image: S.A. White © 2012)

Similar Species

M. dumosa (Bamboo muhly) appearance similar to clumping bamboo, with a graceful hanging habit with light, airy thin evergreen foliage; they grow to 4 -6' h in one season. Hardy to zone 7a, also grows well in containers.

M. lindheimeri (Blue muhly) bluish foliage on a plant that is very drought and heat tolerant. The 2' tall Texas native has thin, soft-blue leaves and flowers are grayish purple. Hardy to zone 7.

Cultivar – 'Autumn Glow' – 4-5'h with creamy yellow flower spikes.

For more information about rain garden design and other rain garden plants, visit the Clemson Carolina Clear and Carolina Yard webpages: www.clemson.edu/carolinaclear and www.clemson.edu/cy.

Recommended Cultivars

'Pink Flamingos' – 4' h x w, 5' h with flower clusters. Narrow, blue-green stems, wide-arching habit. A selection of Peckerwood Garden in Hempstead, Texas.

'Regal Mist™' – 3-4' h x 4' w, flower clusters add 1.' Narrow, dark green leaf blades, evergreen. Regular (1x per week) watering in extreme heat¹. A selection of Gulf Coast Muhly grass made at Mountain States Wholesale Nursery in Arizona.

'White Cloud' – 1-3' h x w, clouds of white flowers in September. Not as "eye-catching" as pink muhlygrass¹.

References:

- ¹ Armitage, A.M. 2008. *Herbaceous Perennial Plants*. 3rd ed. Stipes Publishing LLC. Chicago.
- ² Native Plant Database. *Muhlenbergia capillaris* (Gulf muhly). Lady Bird Johnson Wildflower Center. The University of Texas at Austin. Accessed. 11 April 2011.
- ³ Floridata. *Muhlenbergia capillaris*. <http://www.floridata.com/ref/m/muhlcap.cfm>. Accessed 11 April 2011.
- ⁴ Kirk, S, S Belt. 2010. Plant fact sheet for Hairawn Muhly (*Muhlenbergia capillaris*) USDA-Natural Resources Conservation Service, Norman A. Berg National Plant Materials Center, Beltsville, MD 20705.

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www.clemson.edu/public/carolinaclear



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